



Faculty of Medicine and Health Sciences

**WEIGHT LOSS PRACTICE AMONG WOMEN IN THE
POPULATION OF TAMAN PUTERI, JALAN SAMARIANG,
KUCHING, SARAWAK**

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This project is submitted in partial fulfillment of
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ABSTRACT

Overweight and obesity are increasing in Malaysia especially among women. Studies had shown that many people had tried to lose weight in order to maintain an ideal body weight to be more attractive and prevent obesity-related problems. Many weight loss methods had also been used in order to lose weight. This study aimed to describe weight loss attempts among women and the reasons for its practice. In addition, it also attempted to establish the common weight loss methods used in Kuching, Sarawak. A descriptive-exploratory survey, which was conducted using structured questionnaire, starting on the 1st January 2005 until 28th February 2005 in Perumahan Taman Puteri, Jalan Samariang, Kuching. A total of 30 women aged 20 to 49 years old who were attempting to lose weight was recruited. The outcome measures of this study are Information about participants characteristics, weight loss attempts using various weight loss methods, reason for losing weight, , criteria for the choice of weight loss methods and body weight and height was obtained to calculate the Body Mass Index (Weight in kilograms divided by height in meters squared) among participants. The findings showed that the prevalence of attempt to lose weight was higher among younger women between the ages of 20 to 29 years old. Respectively, among those attempting to lose weight, the most common strategy was combination of exercise and dieting (n = 14). Other reported weight loss practices included combination of exercise, dieting and weight loss products (n=5), combination of dieting and meal modification (n=4), use of weight loss products (n=5), and exercise (n=2). Approximately 47.8% (n=11) of overweight respondents and 30.4% (n=7) of obese respondents reported that they had been counseled to lose weight.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

In recent years, there is an increased rate of overweight and obesity in industrialized countries including Malaysia, which lead to high proportion of morbidity and mortality (Alwi, Siew & Wai, 2002). Overweight refers to an excess of body weight that includes all tissues such as fat, bone and muscle. Overweight is defined as a Body Mass Index (BMI) between 25 and 29.9kg/m^2 , where a person's BMI is defined as their weight in kilogrammes divided by the square of their height in metres (WHO, 1997). Obesity refers specifically to an excess of body fat, whereby it is defined as a BMI of 30kg/m^2 or more (WHO, 1997). Overweight and obesity were as a result of imbalance between energy intake and expenditure (Kopelman, 2004). Being overweight does not mean being obese. So when is someone considered overweight or obese? Use BMI is good enough and accepted globally to identify overweight or obese individuals. Obesity is a growing public health problem. Therefore many studies have investigated this field. Obesity can have profound negative health and social consequences. The word "obese" sounds terrible. Most of us think that it is the obese people who really need to worry about their health. They must battle issues like diabetes, heart attack, stroke, osteoarthritis, hypertension, gall bladder disease, sleep apnoea and certain cancers (WHO, 1997). Many are aware of the health problems associated with obesity and many are also engaged in different form of weight loss practice. Health experts also agree that adults who are overweight and having weight-related medical problems or a family history of such problem can benefit from

weight loss (Watson, 2000). The higher the risk for medical problems and the greater the need for weight reduction (Wing, 2002).

There are various types of weight loss methods that can be used in order to have an ideal body weight. Healthy practices included exercise, reducing amounts of food, breastfeeding, and meal replacement (Dawson, 2000). Unhealthy practices included fasting or starvation, skipping meals, smoking, and using laxatives, diuretics, diet pills, and slimming teas (Sullivan, 1995).

Gender differences in weight loss

Obesity is a women's health issue because obesity disproportionately affects women. One study showed that 33.4% of women were obese compared with 27.5% of men in that survey (Shapses, Sue and Heshka, 2004). Why do men seem to lose weight more quickly than women? In fact, men's bodies are trained by evolution to have strength and speed. They have a different muscle-to-fat ratio in their bodies, which makes it easier for them to speed up their metabolism and burn fat (Dwyer and Mayer, 2001). Women, on the other hand, are hard-wired to reproduce. They keep an insulating layer of fat on their bodies that men do not have (Blackburn and Kanders, 2004). In addition, fat is essential for the production and storage of sex hormones, whereby progesterone production begins with an adequate level of cholesterol in the blood (Sullivan, 1995). Women do not lose weight rapidly because they are genetically programmed that way and additionally, the decreasing levels of estrogens and progesterone that occur in pre-menopause and menopause can cause weight gain and a change in body shape in some women (Dan and Logan, 1995). Besides that, the culture's excessive drive for female

slimness may promote excessive restrictive eating patterns, which can then trigger binges of overeating (Burke and Savage, 1992).

Prevalence of weight loss practice among women

Attempting to lose weight is very prevalence around the world. For example, voluntary weight loss is also becoming a common practice in Malaysia and appears to be increasing in prevalence (Alwi et al., 2002). The practice of losing weight is increased related to the increase of health consciousness among the general public. A survey conducted in 2002, which noted that about 23.2% of the overweight people had tried to lose weight before and 6% of the obese people reported that they were trying to lose weight as well (Alwi et al., 2002). It also reported that female, Malays and those between the ages 20 to 49 years old are more likely to try to lose weight (Stephen, 2004). Female within the age 20 to 40 years old are twice as likely to attempt weight loss as men, whereby this is consistent with the common notion that a slim body is more important to the attractiveness of a women than a man in order to maintain their good image (Alwi et al., 2002). The reduction of metabolic rate lead to increasing number of overweight adults within the age of 40 years and above. This resulted in an increase prevalence of people in this age group to lose weight (Alwi et al, 2002).

Gap of knowledge

No study been reviewed for Sarawak, gap of knowledge was just claimed. Among women in Sarawak, the rate of weight loss practice is still low especially among those who lived in the rural area. This means that they ever tried to lose weight and chose some kinds of weight lose method such as exercise based on their convenience and afford. Therefore, more research should be conducted to gain knowledge of weight loss practice among women in Sarawak.

1.1 Statement of problem

Nowadays, more and more people in Malaysia become obese or overweight due to improper dieting and not enough exercise. Therefore, weight loss practices become one of the major concerns among the public especially women. Indication of people interested to stay healthy and to have normal BMI, mass media like television, radio, newspaper and magazines took this opportunity to increase the awareness of weight loss among the public besides promoting various weight loss products and exercise equipments that can be found in many health shops. Some of the researchers also engaged in weight loss practice because of their desire to look more attractive and prevent from becoming obese. From observation, they used many weight loss methods such as exercise and used weight loss products to reduce their weight. Some of them achieved benefits from weight loss attempts and most of them were still not satisfied with the choice of the weight loss methods. This was because they were not compliance with weight loss methods or they failed to identify the most effective methods to lose weight. As a result, they could not achieve a desired weight and lead to many problems like depression, stress, and low of self-esteem. Therefore, the purpose of this study was to describe the prevalence of

weight loss attempt related to age, race or ethnicity, marital status, education, occupation and monthly income and to describe the goals and duration of such attempts and the rate of effectiveness of a weight loss practice.

1.2 Research questions

Specifically this study was proposed to answer the following questions :

- (1) What are the types of weight loss methods used by the subjects?
- (2) What are the criteria(s) for the choice of weight loss method(s)?
- (3) What are the factor(s) that influence weight loss practice among women?
- (4) What is the duration of weight loss practice among women?
- (5) How do the subjects perceived effectiveness of a weight loss practice?
- (6) What is the role of pharmacists and other health care professionals in weight loss practice?
- (7) Is there any relationship between subject's demographic characteristics and weight loss practice?

1.3 Significance of the study

Obesity brings many implications to health and medical services. There was increased rate of obesity, especially among women that lead to many health problems. Obesity will increase total expenditure of medical services in attempt to cope with obesity-related problems. Therefore, the significance of this study is to improve women' health associated with obesity. and the findings can be used to improve health by the health care professionals.

1.4 Definition of terms

This study focused on the women within the ages 20 to 49 years. This is because early adulthood within the ages 20 to 25 years is considered as the golden time for women to be healthy and more attractive. This group of people has a lot of initiatives to maintain their ideal body weight and slimness. In the middle adulthood, the increasing of age causing women to be more concern of obesity-related risks rather than to look attractive. This is because women tend to have many health problems related to obesity like hypertension, diabetes mellitus, and cardiac disease if they are not concern about their body weight within this age. Weight loss practice is defined as an attempt to lose body weight according to increased awareness of obesity-related problems and desire to be healthier and more attractive (Blanck, Heidi and Michels, 2001). Weight loss practice is focused on women who had engaged in dieting and exercise to lose their weight for certain duration. Weight loss practice also involved women' compliance to weight loss and effectiveness of weight loss methods used.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Obesity refers specifically to an excess of body fat, whereby it is defined as a Body Mass Index (BMI) of 30kg/m^2 or more (WHO, 1997). Most of the research stated that obesity was a prevalent public health problem and leads to many health consequences (Shapses, Sue and Heshka, 2004). Much attention had been focused on the role of weight loss in treating chronic health conditions, especially diabetes, hypertension, and heart disease (Blanck, Heidi and Michels, 2001). In all racial and ethnic groups, being mildly or moderately overweight at age 20 to 22 years was linked with substantial incidence of obesity by age 35 to 37 (Shapses, Sue and Heshka, 2004). Overweight children were at increased risk for becoming obese adults, and obese adults were, in turn, at risk for raising obese children, so effective public health intervention must address the links between these two populations (David and Williamson, 1992). In addition, a study stated that women were twice as likely as men to become obese by age 35 to 37 years, adjusted for race or ethnicity, pediatric weight development, and birth year (Thomas, 1995). Treatment of obesity in young adults should be a health priority and that society must work to alter dietary and exercise standards (Levy, Alan and Heaton, 1997). Some studies also found cultural desire to maintain ideal body weight, which have resulted many individuals attempt to lose weight especially women (Dawn, 2001). One of the recent studies had shown that 40 % of women in the United States reported that they were currently trying to lose weight (Alan & Levy, 1993). While, approximately 37.7% of women in Malaysia admitted that they had tried to lose weight before (Alwi, Siew, & Wai, 2002). A total of 71%

of African American women were overweight and obese with 40.8% of them had intended to lose weight over the last year and it appears that females, and those between the ages of 20 to 49 years old were more likely trying to lose weight (Dawn, 2001). Women had a higher prevalence of trying to lose weight than did men within every sociodemographic and weight category (Grace, 2004). Estimates were that women gain weight over a longer period of their life span than men because women tend to have more life change events associated with weight gain, such as marriage, pregnancy, menopause, and care giving responsibilities (Dawn, 2001). These explained the causes of weight change among women.

2.1 Definition

Weight loss practice is defined as an attempt to lose body weight according to increased awareness of obesity-related problems and desire to be healthier and more attractive (Blanck, Heidi and Michels, 2001). Women had a higher prevalence of trying to lose weight than men within every sociodemographic and weight category, whereby the reported prevalence of trying to lose weight was 28.8% for men and 43.6 % for women in the United States (James and Heath, 1999). Among American women, 28.7% to those with normal BMI reported trying to lose weight (Green and Kathryn, 1997).

2.2 Health consequences

Medical problems commonly resulting from untreated obesity include certain cancers, depression, hypertension, heart disease, stroke, diabetes, liver disease, gallbladder disease and osteoarthritis (Shapses, Sue and Heshka, 2004). Affected people may gradually develop hypoxemia (decrease blood oxygen saturation), and have problems with sleep apnoea (periodic cessation or breathing while asleep), so both problems may result in feeling of drowsiness throughout the day (somnolence), high blood pressure and pulmonary hypertension (Sullivan, 1995). Excess of body fat leads to sodium retained in the body, which causing increases in blood pressure and the heart has to work harder (Burke and Savage, 1992). A stroke occurs when the blood supply to the brain is suddenly interrupted or a blood vessel in the brain bursts (King and Blair, 2001). Osteoarthritis is the destruction of joints from the wearing away of the cartilage that protects them (Burke and Savage, 1992). Bone and muscle problems can also develop as the body struggles to hold the weight (Cope and Hall, 1995). Excessive weight produces more cholesterol, increasing the risk of developing an enlarged, ineffective gallbladder (King and Blair, 2001). Liver disease occurs when fat builds up in the liver cells resulting in liver damage or liver failure (Kumanyika, 1994). Depression is related to self-esteem, confidence, and general well-being suffer, causing stress related symptoms and further overeating (Dawson, 2000). Burke and Savage (1992) stated that overeating or increased calorie consumption would increase the blood glucose level in the body and lead to diabetes (Kumanyika, 1994). Therefore, weight loss may not only help control diseases worsened by obesity, it may also help decrease the likelihood of developing these diseases (Cleland and Graybill, 1998).

2.3 Contributory factors of weight loss practice

Overweight or obese women were more likely to state that they were trying to lose weight to become more attractive and increase their self-esteem in any job, and secondly, to improve general health (Green & Kathryn, 1997). It was reported that 45% of pregnant women are more aware of weight loss practices to reduce their weight after delivery (Jeffrey and Robert, 1999). Some studies examine factors influencing weight-loss practice among women, which many seek to improve their self-images as they may or may not be overweight or have physical or emotional health problems caused by their weight (Abraham and Serdula, 1992). Others speculate that the greater concern among women may reflect increased societal pressure towards thinness (Jeffrey and Robert, 1999). Many women felt that body image and exercise were important for their self-esteem, and wanting to lose weight because they were afraid that they might gain weight and feel fat (Alan & Levy, 1993). 97.4% of the women in Malaysia claimed that the main reasons for them to lose weight were to be healthier, to look more attractive, or both (Alwi et al., 2002).

2.4 Weight loss methods

2.4.1 Exercise and dieting

Serdula (1992) found that there were many weight-loss methods, where dieting and exercise were the most prevalent types. Alwi et al. (2002) also found that 79% of the Malaysian reported that they were both changing their diet and exercising more as part of their weight loss attempts. Regular physical activity is a key factor in successful weight loss and long-term

weight maintenance (Abraham, Clark, and Niaura, 1991). Exercise is also known as physical activity and includes anything that gets a person moving, such as walking, dancing, or working (King and Blair, 2001). Being physically active helps them feel better physically and mentally besides provides rewards of weight loss (Kopelman, 2004). Younger and unmarried women were more likely to include both diet and exercise in their regimens but were less likely than older respondents to be on long-term regimens (Levy, Alan and Heaton, 1997). Combined benefits of physical exercise with a good diet plan help to lose weight and keep it off (Stephen, 2004). Those who are trying to lose weight are encouraged to get active for at least 30 minutes everyday to keep the calories from being stored as fat in the body (Burke and Savage, 1992). A study reported that, persons attempting weight-loss spending an average of approximately three hours per week exercising, whereby walking were by far the most common type of exercise behavior among women (Levy, Alan and Heaton, 1997). Walking can be accomplished anywhere, can be done anytime, not stressful on the body, and people may feel better after a fast pace walk, whereby the faster the pace, the more calories will burn (King and Blair, 2001). Despite the health benefit of exercise, there is little evidence to suggest that it alone will produce significant weight loss without the addition of dietary and behaviour modification, evidenced by 34.2% of women who were reported that they do exercise 150 minutes or more per week (Dawn, 2001). A study demonstrated that achieving a minimum of 150 minutes per week of exercise throughout the 18-months program enhanced weight loss compared with not maintaining this minimal level of exercise (Nawaz, 1999). Another study found that using physical activity as a method to lose weight was least common among the obese, the least educated and the oldest women (Shapses, Sue and Heshka, 2004). This suggested a need for better communication by health care professionals to facilitate the adoption of physical activity for weight control, especially among these groups. Shapses, Sue

and Heshka (2004) stated that higher income women were more likely to engage in recreational physical activity, whereas lower income women reported more work-related and home maintenance-related physical activity besides walking and aerobic.

The most common behaviour associated with dieting undertaken by women was regular self-weighting, that is, at least, once a week (Grace, 2004). The best formula for losing weight is to reduce food intake in order to decrease the number of calories while increasing the physical activity everyday (Cope and Hall, 1995). Most of the women have tried to reduce their food intake by skipping meals, but although it reached conventional levels of statistical significance, the trend suggests that such practices are more common in women with lower income (Jeffrey and Robert, 1996). Fewer than 15% of weight-loss practitioners used menus, ate more frequent meals, eating less fat, ate more vegetables and fruits or kept a record of food intake (Levy, Alan and Heaton, 1997). It was recommended that the average size women stay between 1200 and 1400 calories per day, while men eat between 1500 and 2000 calories per day to lose weight (WHO, 1997). The use of special diet food products was widespread, whereby the most widely used diet food products were low-calorie sweetener or artificial sugar and diet soft drinks (Dawn, 2001). Short-term success for some of these methods has been documented, but information on long-term effectiveness and safety up to 5 years is limited (David, and Williamson, 1992). Meal replacement is one of the methods to prevent obesity and to promote weight loss, which involve eating less fat, increasing fruit and vegetable intake, cutting out sweets and junk food, eating low cholesterol diet and eating low-calorie diet foods (Dawson, 2000). A reduced-calorie diet that has a good balance of carbohydrates, proteins, and fats is the safest and best way to lose weight (Burke and Savage, 1992). Low fat diets are generally low in calorie that will guard against cancer and other diseases. Low carbohydrate diet by eating

more vegetables and fruits is an important part of a low fat diet plan (King and Blair, 2001). People also can benefit from weight loss attempt by cutting of sweet and junk food (Dawson, 2000). Besides that, eating low cholesterol foods by reducing food like butter or margarines, red meat, eggs, cookies, cakes, chips, and popcorn at Movie Theatres, can lower bad cholesterol count and help to lose weight (Wing, 2002).

2.4.2 Other weight loss methods

Nowadays, the people who were trying to lose weight tend to use various weight loss products, which included slimming pills, slimming teas, body slimming cream, and supplements like vitamins (Thomas, 1995). There were many types of diet pills and herbal, or natural supplements that the people could buy over-the-counter at a drug or discount store, or on-line. However, a study also suggested that some diet pills could raise blood pressure and had harmful side effects (Levy, Alan and Heaton, 1997). For some people, diet pills prescribed by a doctor could be helpful (Green and Kathryn, 1997). There were some benefits of slimming pills, for example, slimming pills from TRIMMERS are 100% natural herbs which contains Kola Nut, whereby it helped to speed up the body's metabolic slimming rate, suppressed appetite, boosted energy levels, and it helped to eliminate excess body fat through the process of Thermogenics (Wing, 2002). Chinese, Mongolians, and African culture believed herbal teas helped for weight loss as their traditional medicine (Sullivan, 1995). Slimming tea supported weight loss by stimulating the production of urine to get rid of excess water and waste products (Thomas, 1995). Diet teas were created from popular blends of herbs used by the Chinese for generations as an aid to those on weight loss programs (Wing, 2002). A study stated that these special teas were traditionally used for cleansing and to help the body digest fat (Cleland and

Graybill, 1998). There were two kinds of slimming or diet herbal teas-those that contain herbs like mahuang that suppressed the appetite but can also cause nervousness, sleeplessness and palpitation (Green and Kathryn, 1997). There were many kinds of slimming teas that been introduced to help losing weight, Chrysanthemum Tea is one of them, which had a pungent, sweet flavor with a subtle bitter aftertaste, made from the petals of a flower that been picked and gathered and dried the sun naturally (Wing, 2002). Other slimming tea product was Ephedrine Alkaloids that was commonly known as Ephedra or Ma Huang, whereby it brings the adverse effects of changes in blood pressure, dizziness, tremor, increased heart rate, headache, chest pain, heart attack, stroke, seizures, psychosis or even lead to death (Sullivan, 1995). People also used body slimming cream, which was specially formulated with natural ingredients that was claimed to make the body sweat the fat away (Wing, 2002). Until now the only way to get the body to sweat was through long exercise, but body slimming cream had changed as claimed by manufacturer (Green and Kathryn, 1997). This was one of the products for anyone who wanted to lose weight, but did not like to exercise, did not have the time, or a physical problem prohibited him or her from exercising (Wing, 2002). People could simply apply a thin layer of slimming body cream to the problem area such as stomach, thighs, buttocks and massage into the skin. The benefits of body slimming cream was targeting localized excess body fat without affecting other body parts, promoted sweating in the area applied, which helps to dissolve fatty deposits, no painful and could be used on any body part except for facial use (Wing, 2002). Besides those weight loss products, supplements like vitamins were also popular among the people who were trying to lose their weight. The use of stimulant laxative like senna to lose weight was not safe because it worked by irritating the colon to empty its contents, whereby this means that the colon might no longer function properly of its own and someone who use it may not be able to go to the bathroom without the

laxative (Green and Kathryn, 1997). Also some studies showed that long-term use of senna was associated with a higher risk of colon cancer (Cope and Hall, 1995). Most people make the mistake of skipping meals and attempting to stick to a starvation diet to lose weight without knowing that these diets always backfire because diet too low in calorie will eventually cause binge or over-eating (Levy, Alan and Heaton, 1997). Not everyone choose smoking as a successful method to lose weight because of increased awareness of harmful effects of smoking among men and women (David and Williamson, 1992). Studies showed that smoking habit could lead to weight loss and most people did gain weight about 5 to 10 pounds when they stop smoking (Dawson, 2000).

2.5 Criteria for the choice of weight loss method(s)

Alwi et al., (2002) documented two main criteria for the choice of a particular weight-loss method were convenience and safety. Another study has shown that 54% of respondent was choosing weight-loss method based on its price, the more cheaper weight-loss product, the more people use it (Walcott-McQuigg, 1995).

2.6 Duration and effectiveness of weight loss attempt

Based on the result of one study, the average duration of the current weight-loss attempt was between five and six months for women, whereby duration of the current weight-loss attempt decreased dramatically as Body Mass Index (BMI) increased that is weight loss practitioners with higher BMI levels engaged in more frequent weight loss attempts of shorter duration than

did those with lower BMI levels (Green and Kathryn, 1997). Other study also estimated the median duration of the current weight loss practice for those trying to lose weight for a year or less, whereby among women, the median duration of the current weight loss practice was four weeks for women younger than 50 years of age (David and Williamson, 1992).

Fifty percents of the users in Malaysia perceived weight-loss methods worked effectively such as dieting and exercise, slimming teas, vitamins and diet supplements (Alwi et al., 2002). The effectiveness of the different weight-loss programs may vary among different cultural group (Walcott-McQuigg, 1995).

2.7 Relationship between subject's demographic characteristics and weight loss practice

Weight dissatisfaction and current and past weight loss attempts were all negatively associated with age among women, but were unrelated with age among men (Green, and Kathryn, 1997). Among women, the odds of trying to lose weight decreased with age, whereby the odds were about 20% higher for those aged 30 to 49 years (Thomas, 1995).

Some study examined the relationship between socioeconomic status and weight loss practices in women, whereby increases in weight with age were greater in lower socioeconomic women (Taylor and Willett, 2004). The access hypothesis for explaining social class differences in obesity argues that low socioeconomic reduced educational opportunities, resulting in lower levels of knowledge and behavioral skills needed to control weight (Taylor and Willett, 2004). In addition, economic constraints restrict behavioral options such as access to healthy foods, to